



# NOAA Ship NANCY FOSTER

## ENGINEERING

### General

- Cruising Speed: 10.5 Knots
- Range: 3,500 nm
- Total Power: 1850 Shaft HP
- Fuel Capacity: 56,757 gallons
- Fuel Consumption: 83.3 gal/hr at full ahead
- Fuel Type: #2 Diesel
- Endurance: 15 days
- Endurance Constraint: Food

### Propulsion Plant

- Main Propulsion
  - Model: Cummins KTA 50M
  - Cylinders: 16
  - Shaft Horsepower: 1250
- Bowthruster
  - Type: Omnithruster
  - Power: 400 HP
- Propeller
  - Type: fixed pitch
  - Manufacturer: Nakashima
  - Diameter: 90 in
  - Blades: 4
- Z-Drives
  - Model: Ulstein Marine Ltd 260/370-H
  - Power: 300 HP at 180 RPM
  - Propeller: Four 42" fixed blades

### Freshwater System

- ALFA Laval Freshwater generator JWP-16-C40/50
- Everpure Bromine Feeder
- Daily output: 75 gal/hr at full ahead, Approx 1800 gal/day
- Holding capacity of potable H<sub>2</sub>O: 15,016 gal
- Consumption: ~1,000 gal/day

## **Pollution Control**

- Dry type: electrochemical
  - MSD Unit: Omnipure
  - MSD System holding tank: 8177 gal

Note: Nancy Foster is a zero discharge ship, both gray and black water are treated through the system

- Oily Water Control
  - Manufacturer: Village Marine Tec
  - OWS flow rate: 4.2 gal/min
  - Tank capacity: 1195 gal

## **Electrical System**

- Generator
  - Quantity: 3
  - Model: Cummins VTA28GS/GC
  - Cylinders: 12
  - Design: V-type turbo charged
  - Power: (3 phase) 416-480 volts, 200 amps at 60hz

- Emergency Generator
  - Model: Cummins NT855
  - Cylinders: 6
  - Design: In-line turbo charged, 4-stroke engine
  - Power: 355 bhp at 1800 RPM
  - Output: 125Kw